National Complete Streets Coalition
Complete Streets Workshops

Helping communities design, build, and operate streets to serve all users

"I saw many eyes and minds widen... especially the ones sitting on the fence."
- a MN workshop client

Effective complete streets policies help communities routinely create safe and inviting road networks for everyone, including bicyclists, drivers, transit operators and users, and pedestrians of all ages and abilities. The National Complete Streets Coalition, founder of the complete streets movement, has created a workshop series to respond to state and local agencies' need to learn how to balance the needs of all users, and develop and implement effective policies. Each interactive workshop is led by two nationally-known complete streets design and policy experts.

1. Complete Streets Introduction - Key stakeholders will
- Build a common understanding of complete streets
- Consider several types of successful complete streets policies
- Compare how complete streets designs use existing right-of-way
- Apply complete streets tools to local examples

2. Complete Streets Policy Development - In a collaborative process, participants will
- Contrast the nine elements of effective complete streets policies with existing policies and internal procedures
- Identify area complete streets goals and performance measures
- Create draft language for a customized complete streets policy

3. Complete Streets Policy Implementation - Through hands-on exercises, participants will
- Assess existing complete streets policy and decision-making process outcomes
- Identify ways to strengthen polices and the four steps to more effectively implement them
- Demonstrate a six-step decision-making process to routinely include and balance the needs of all users

These workshops engage
- Traffic engineering, public works, roadway design, and maintenance staff
- Transportation, community development, and land use planners
- Bicycle, pedestrian, transit, Safe Routes to School, and health promotion staff
- Mayors and other elected officials; city, county and planning commissioners; MPO boards
- Stakeholders and advocates for older adults, people with disabilities, children, walking, bicycling, transit, health, and the environment

To schedule a workshop, contact Linda Tracy:
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IMPLEMENTATION FAQ

What is the best way to educate residents about the value of complete streets?
How does private development contribute to complete streets?
What federal funds are available for complete streets?
Does this create a constant shortage in funding to address congestion?
How realistic is DOT policy when "excessive cost" gives local staff an excuse to ignore complete streets principles?
Do you have any data that shows the economic impacts of complete streets compared to traditional road design?
What percentage of road would you suggest be dedicated for vehicles and other travel modes?
Have any issues arisen with emergency vehicles?
What is your opinion on striped cyclist lanes vs. integrated cyclist travel? Are there studies on this?
Where is the optimum placement for trees along complete streets?
How can we address the issue of automatic re-striping during repaving projects?
Are there significant difference between "Complete Streets" and "Context Sensitive Solutions"?
How do you address the issues of bus pull-outs?
Doesn't federal law require certain design features, such as mandating travel lanes be at least 12 feet wide?

Some of the following responses are derived from an American Planning Association complete streets training, with answers provided by planning staff from Boulder, Colorado, Chris Conklin of VHB, and Barbara McCann of the National Complete Streets Coalition.

What is the best way to educate residents about the value of complete streets?

Many people respond well to pictures of existing local streets that are 'complete' side by side with photos of 'incomplete' roads in areas where pedestrians and other users struggle. Explain that with a complete streets policy, all roads can be made safe and convenient for pedestrians, bicyclists, transit riders, and motorists. Be clear that this is a policy - not design - solution that won't mandate a single look for every road. Use our introductory PowerPoint presentation (.ppt) and fact sheets that explain the benefits of complete streets. Consider bringing a complete streets workshop to town, which can build a common understanding of complete streets.

How does private development contribute to complete streets?

In growing communities or in those faced with large-scale redevelopment, road building falls primarily to private developers. There are two halves to developer involvement: requirements for new development and requirements for redevelopment. Connectivity and multimodal accommodation requirements in land development regulations are vital tools to ensure that new streets balance the needs of all users. Community members and agency staff must work with developers on a vision for each street, with cross-sections to show how all modes are accommodated. Furthermore, staff reviewing plans should be familiar with complete streets goals and how to implement them. Finally, inspectors must make sure all complete streets requirements are met in the construction stage.

In Boulder, the transportation master plan (TMP) includes facility plans for all modes. In addition, in areas anticipated for significant change/redevelopment the master plan has been refined further through "area plans" and the adoption of transportation network plans to provide a detailed plan for where new streets, bike, and facilities are required. Through redevelopment, applicants are required at a minimum to reserve the necessary right-of-way and to build their share of these facilities.

What federal funds are available for complete streets?

Adopting a complete streets policy means ensuring that all future transportation projects take into account the needs of all modes, so complete streets should be funded through existing, mainstream programs. Non-motorized projects are eligible for funding through a number of Federal Highway funding programs, including Surface Transportation Program (STP), Transportation Enhancements (TE), Congestion Mitigation and Air Quality (CMAQ), and Safe Routes to School (SRTS). Transit projects are generally funded through separate transit programs, though funds can be flexed from STP. A new rule-making proposes broadening the use of federal transit funds to provide access by non-motorized modes to stops and stations. Some jurisdictions have dedicated funding to retrofitting streets for access by people who use wheelchairs or have other disabilities. State and Metropolitan Planning Organizations (MPOs) may or may not limit the expenditure of funds for certain purposes, and ensuring that funding criteria give 'points' for multimodal accommodation can ease the way for complete streets projects.

The City of Boulder has secured federal funding for multimodal projects through the Denver Regional Council of Governments' competitive Transportation Improvement Program process. This is done through funding categories for congested regional corridors, STP, CMAQ, and TE. The city put significant effort into making sure that the MPO project eligibility standards and the scoring process were structured to support multimodal (complete streets) investments. Boulder has also received funding for bicycle and pedestrian improvements through the federal SRTS program. Some communities, notably Seattle, Washington and Sacramento, California, have funded significant non-motorized infrastructure through the CMAQ program, using eligibility standards that take into account cost-effectiveness. This makes such projects more competitive, because such infrastructure is inexpensive in relation to the air quality benefits it provides.

A large portion of transportation funding is targeted toward congestion relief for motorists. When a philosophy is taken that balanced multimodal capacity supersedes maximizing motor vehicle flow, does this create a constant shortage in funding to address congestion?

Complete streets is about balancing out a transportation system that has emphasized motor vehicle movement to the exclusion of other, existing users of the roadway. Those other users — bicyclists, pedestrians, transit riders — have been there all along, but

their needs have been too often ignored and their safety imperiled. Complete streets policies and procedures recognize and correct this, but they usually do not in themselves require a certain percentage of spending on other modes (exceptions include Oregon and Connecticut's state laws). Designing streets for all users does not automatically mean spending large sums of money and including such features from the beginning can make any additional costs negligible. Check our costs fact sheet for more information.

On the issue of congestion, many communities are recognizing that automobile capacity expansion projects have a limited ability to reduce congestion. The Texas Transportation Institute found that transit service and providing more travel options, including bicycling and walking facilities, are important elements in reducing congestion. Streets that provide travel choices can give people the option to avoid traffic jams and increase the overall capacity of the transportation network. Seattle, Washington and Boulder, Colorado have both been successful in addressing traffic congestion in this way.

How realistic is a DOT policy when "excessive cost" gives local staff an excuse to ignore complete street principles?

If there is a cost exception in a complete streets policy, it must be carefully defined for the correct project scope. Though federal guidance suggests a 20% cost increase is "excessive," some communities have found any set percentage to be too arbitrary. The true measure of "excessive" cost should be relative to the scope and context of the project. In a downtown area where pedestrian traffic is high, many municipalities invest significantly in pedestrian-friendly infrastructure. In a more rural location, installing wide, paved shoulders rather than purchasing additional right-of-way for a separate bike path is a lower cost solution that invests proportionally relative to the context and expected use.

The policy must also include a clear procedure for justifying this and any other exception. This procedure should require high-level approval from a senior manager, so that simply ignoring the complete streets principle is not an option.

Do you have any data that shows the economic impacts of complete streets compared to traditional road design (i.e., property value changes, etc.)?

Dan Burden of the Walkable and Livable Communities Institute tells the story of a complete street treatment in West Palm Beach Florida that resulted in a $150,000 increase in home sale prices on the street in just one year. In Washington, DC, they are so convinced that creating complete streets will improve economic performance that they have instituted the Great Streets program. More information on economic benefits is available in our Economic Revitalization fact sheet.

An indicator of the potential importance of a multimodal transportation network to property values is the real estate tool Walk Score. Walk Score uses Google Maps to give every address in the nation a score from 0 (least walkable) to 100 (walking paradise), based on the number and variety of destinations within walking distance. Front Seat, the firm behind Walk Score, has commissioned research to determine if a higher Walk Score correlates to a higher home value. Economist Joe Cortright says the preliminary results show that each additional point on the Walk Score scale correlates with increased housing values on the order of a thousand dollars or more, depending on the regional market.

Connected, complete streets are a prerequisite to true walkable urbanism, according to land use strategist, professor, and author Chris Leinberger: "If you have an eight lane arterial without complete streets infrastructure, you will never see high density walkable urbanism take place along that corridor. Complete streets will be a precondition before you can get walkable urban development that will help meet the pent-up demand for this type of neighborhood."

What percentage of a road would you suggest should be dedicated for vehicles? What percentage for other travel methods (pedestrian, bicycle, transit, etc.)?

The portion of road space dedicated to different users will vary according to the profile of the current and projected future users of the road; there is no hard and fast percentage. For example, a street at a city center which serves many pedestrians will need wider sidewalks and median islands; a major transit corridor should be designed with more features that help buses travel quickly and provide for the movement of those boarding and disembarking; a road through a corridor where strip shopping centers are being replaced by higher-density mixed use buildings would likely need an investment in features to better accommodate the projected increase in pedestrians. No single figure for lane width or budget expense can cover the variety of circumstances.

Creating safe and attractive bike/pedestrian environments is often challenged by proponents of the primacy of the emergency vehicle who believe that wider/straighter/sterile is always better. How have you been able to overcome this conflict? Have any issues arisen after completion?

Complete streets and emergency vehicle access can go hand-in-hand, if the design process is collaborative and done right. The Congress for the New Urbanism, working with the U.S. Environmental Protection Agency's Smart Growth program and fire marshals from across the United States, has created the Emergency Response and Street Design Initiative. The goal of the initiative is to pursue common ground and strategize how narrower, more walkable streets can serve - and even improve access for - emergency vehicles. More resources can be found on the Initiative's website.

Further research has uncovered new techniques and strategies to make communities safer, more walkable, and more accessible for emergency vehicles. In Fresno, California, narrower streets were proposed to enhance walkability, and planners used research and field simulation to overcome resistance to "skinny" streets and demonstrate how they could be reconciled with emergency access. In addition, a recent study from the *American Journal of Preventive Medicine* explored how sprawling development patterns increased EMS response time and delayed ambulance arrival.

Some people promote cyclist integration into motorist travel as a safer than segregation transportation lanes. What is your opinion about painted or striped cyclist lanes vs. non-painted or integrated cyclist travel? Are their studies on what design is safer and more functional?

Bicycle lanes serve an important purpose in giving space to cyclists and in indicating to motorists that bicyclists will be present, particularly on higher-volume higher-speed roadways. A literature review found they generally do improve cyclist safety. However, bike lanes are not necessary for bicycle travel. Lower volume, lower speed roadways don't need them, and experienced cyclists will share lanes with cars without hesitation. Different facilities serve different purposes, as well as users with different levels of experience, and communities will make difference choices about what is appropriate locally.

Where is the optimum placement for trees along roadways when you are working to include bicycles, sidewalks, and the utility rights-of-way?

Appropriately selected, sited, planted, and maintained vegetation is an important component of every right-of-way. Many communities pursuing complete streets are also exploring ways to increase tree canopy, reduce stormwater runoff, and improve air quality. Planting strips are generally best placed at the curb to maximize their many benefits for multiple users - notably calming traffic and protecting pedestrians. Islands and curb extensions provide prime opportunity for additional plantings and give tree roots more space. There will be trade-offs in accommodating all users along with necessary landscaping and utilities, but each situation should be addressed individually.

Often, when a city resurfaces streets, traffic lanes are made wider to accommodate the car and the re-striping process happens automatically without review that considers adding bicycle lanes or striping wider outside lanes to accommodate cyclists. How can residents and planners collaborate with public works to address this issue?

First, a complete streets policy should include repaving projects in its procedures, including a direction to assess the corridor's use by pedestrians, bicyclists, and transit users to stripe accordingly. Having an adopted bicycle and pedestrian plan can very helpful in these cases, as they provide a vision for each street. When a paving project arises, the vision is then implemented as part of standard operations.

Second, all transportation improvement projects can be submitted and reviewed by citizen advisory committees. For example, the Bay Area MPO in California requires that its Complete Streets checklists be distributed to bicycle and pedestrian advisory committees for review.

Are there significant differences between the "Complete Streets" concept and the "context sensitive solutions to road design" concept developed by the Institute of Transportation Engineers?

Context Sensitive Solutions (CSS) initiatives have traditionally emphasized non-transportation changes to improve the integration of the highway into the community. Framing bike/pedestrian/bus/disabled access in this way constricts them as optional 'amenities' rather than as essential transportation modes; as one wag put it, "bicyclists and pedestrians are not context." CSS has also emphasized stakeholder involvement in special planning processes, rather than routine inclusion of all modes in everyday transportation planning. That may be changing, recent Context-Sensitive Solutions workshops have emphasized 'mainstreaming' the process, and there has been greater emphasis on including all road users. The movement for context sensitive solutions has been crucial in changing practices at transportation agencies and stands side by side with complete streets.

The National Complete Streets Coalition has suggested this short explanation for inclusion in the new ITE/CNU Context Sensitive Solutions guide:

"While Context-Sensitive Solutions involve stakeholders in considering a transportation facility in its entire social, environmental and aesthetic context, complete streets policies are a reminder that providing for safe travel by users of all modes is the primary function of the corridor. Under complete streets, basic facilities for bicyclists, pedestrians, transit users, and disabled travelers are necessities, rather than optional items. Their needs must be included regardless of their presence or lack thereof at stakeholder meetings. All modes and users are important on all thoroughfares."

Note also that the MassHighway Project Development and Design Guide addresses context-sensitivity and multimodalism as separate but equally important issues.

Bus pull-outs seem to make sense as they remove buses from general traffic and preserve throughput. In reality, these tend to strand buses, as they're put at the mercy of drivers yielding to them. We have a proposed BRT corridor calling for this, yet doesn't this design ultimately diminish bus headways and make transit less attractive? How do you "calm" the cars in congested urban centers while allowing buses to operate efficiently and without delay?

In-lane stops are optimal for efficient, attractive, and comfortable bus travel and should be the first choice in many contexts. Often, communities choose to use curb extensions (bulb-outs) to provide more room for waiting and disembarking passengers, keeping buses in the travel lane. When a bus is not stopped, these curb extensions also serve as a traffic-calming device.

Boulder tends to install bus pull-outs on a fairly conservative basis for the very reasons identified. Many of the pull-outs that do exist in Boulder are located at the far side of signalized intersections which allows operators to easily pull out during the red signal phase. Also, because of the impact to transit operations, we usually try to only install them when necessary to maintain adequate auto traffic flow. Boulder has recently installed one bus pull-out along one of our future BRT corridors; however, it is attached to an acceleration lane to allow for easier merging. Where right-of-way permits we are working to provide continuous bus/bike/right-turn only lanes in order to better facilitate transit along congested corridors.

An innovative report, *Rethinking the Suburban Bus Stop* (.pdf), is also a good resource on bus stops on complete streets.

More on complete streets and transit can be found in the Complete Streets and Transit workshop report.

Doesn't federal law require certain design features, such as mandating travel lanes be at least 12 feet wide?

The federal government does not issue road standards. Many communities rely on standards issued by the American Association of State Highway and Transportation Officials (AASHTO). But these standards, contained in *A Policy on Geometric Design of Highways and Streets* (commonly referred to as the "Green Book"), do not have any requirements that would prevent Complete Streets treatments.